MONTHLY WEATHER REVIEW.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for October, 1905, is based on data from about 3495 stations, classified as follows:

Weather Bureau stations, regular, telegraph, and mail, 176; West Indian Service, cable and mail, 13; River and Flood Service, regular 52, special river and rainfall, 363, special rainfall only, 98; cooperative observers, domestic and foreign, 2565; total Weather Bureau Service, 3267; Canadian Meteorological Service, by telegraph and mail, 33; Meteorological Service of the Azores, by cable, 2; Meteorological Office, London, by cable, 8; Mexican Telegraph Company, by cable, 3; Army Post Hospital reports, 18; United States Life-Saving Service, 9; Jamaica Weather Service, 130; Costa Rican Meteorological Service, 25. Total, 3495.

Since December, 1904, the Weather Bureau has received an average of about 1700 reports from as many observers and vessels, giving international simultaneous observations over the Atlantic and Pacific oceans at 12 noon, Greenwich time, or 7 a. m., seventy-fifth meridian time. These are charted, and, with the corresponding land observations, will form the framework for daily weather charts of the globe.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. S.I. Kimball, General Superintendent of the United States Life-Saving Service; Capt. H. M. Hodges, U. S. N. (Retired), Hydrographer, United States Navy; Anastasio Aljaro, Director of the Physico-Geographic Institute, San José, Costa Rica; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. N. Shaw, Esq., Secretary, Meteorological Office, London; H. H. Cousins, Chemist, in charge of the Jamaica Weather Office; Señor Enrique A. Del Monte, Director of the the Meteorological Service of the Republic of Cuba; Rev. L. Gangoiti, Director of the Meteorological Observatory of Belen College, Havana, Cuba.

Attention is called to the fact that at regular Weather Bureau stations all data intended for the Central Office at Washington are recorded on seventy-fifth meridian or eastern standard time, except that hourly records of wind velocity and direction, temperature, and sunshine are entered on the respective local standards of time. As far as practicable, only the seventy-fifth meridian standard of time, which is exactly five hours behind Greenwich time, is used in the text of the REVIEW. The standards used by the public in the United States and Canada and by the cooperative observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. The Hawaiian standard meridian is 157° 30′, or $10^h\ 30^m$ west of Greenwich. The Costa Rican standard meridian is that of San José, $5^h\ 36^m$ west of Greenwich.

Barometric pressures, whether "station pressures" or "sea-level pressures", are now reduced to standard gravity, so that they express pressure in a standard system of absolute measures.

In conformity with Instructions No. 43, March 29, 1905, the designation "voluntary", as applied to the class of observers performing services under the direction of the Weather Bureau without a stated compensation in money, is discontinued, and the designation "cooperative", will be used instead in all official publications and correspondence.

Hereafter the titles of the respective forecast districts will be as used in the current REVIEW to accord with paragraph 236 of Station Regulations, dated June 15, 1905.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

The month opened with high northwest winds on the North Sea, and during the 4th and 5th west to north gales prevailed on the British coasts. Barometric pressure was high over the British Isles from the 7th to 14th and 17th to 25th, and low on the 15th and 16th and from the 26th to 29th. In the vicinity of the Azores pressure was low during the first decade of the month and rising or high from the 10th to 15th, 18th to 20th, and 23d to 31st. On the 9th the barometer fell to 29.70 at Horta, Fayal, and the wind reached a velocity of 46 miles an hour from the south. During the 21st and 22d a barometric disturbance moved eastward over the Azores, with pressure falling to 29.66 on the 22d. Passing eastward the Azores storm reached Portugal and Spain, with lowest reported barometer reading, 29.42, at Lisbon on the 24th, and the barometer rose at that place to 29.50 on the morning of the 25th and to 29.88 by the morning of the 26th.

The only West Indian disturbance of marked intensity appeared over the Caribbean Sea south of San Domingo on the 3d and 4th, recurved north near the Windward Passage on the 5th, and passed in a northerly course to the westward of Turks Island on the 6th. From the eastern Bahamas this disturbance moved northeastward and passed to the south and east of Bermuda during the afternoon of the 8th. A fresh east to northeast gale prevailed during the day and night of the 8th at Bermuda, and the barometer at Hamilton at 8 p. m. was 29.66 inches. To the east and southeast of Bermuda gales of hurricane force were reported. From the vicinity of Bermuda the center of the storm moved northeastward to the Banks of Newfoundland. The action of the storm was not severe until after recurving northeastward from the Bahamas, when the barometric pressure began to decline rapidly, with a corresponding increase in wind force. In about latitude 45° north and longitude 45° west the steamship *La Savoie*, at 4 p. m. of the 11th, reported a barometric reading of 27.92 inches; and a disastrous storm-wave, within its area, was encountered on the same day by the steamship *Campania*. Advices to West Indian, Gulf, and Atlantic coast interests regarding the storm were begun October 3 and continued daily until it recurved northeastward over the Atlantic. On the 6th advices to Bermuda and Halifax regarding its movement were begun and